

Applicants : Hans-Gerd Spoeler
For : CURVED ASSEMBLY LINE AND/OR CONVEYOR BELT
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The listing of the claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

Please amend claims 1-17.

Please add claims 18-21 as follows:

1. (Currently Amended) A curved assembly line and/or conveyor belt, ~~in particular~~ for the assembly and transport of motor vehicles or motor vehicle parts in production, ~~which is formed by comprising:~~

carrying elements which are mounted in an articulated manner with respect to one another and engage positively one into the other and which ~~in each case~~ have an upper platform and a lower carrying frame and the end faces of which are convexly and concavely curved in the form of an arc of a circle with approximately identical radii of curvature, so that in each case a convex and a concave recess of two adjacent carrying elements form, bearing positively one against the other, a continuous conveyor belt transition both in curved sections and on a straight line, ~~characterized in that in each case:~~

ones of said carrying elements being intermediate carrying elements (2) with concave end faces (9) that are concave on both sides and others of said carrying elements being load-receiving carrying elements with convex end faces (6, 7) that are convex on both sides, wherein said intermediate carrying elements and said load-receiving carrying elements alternate with one another in the longitudinal direction of the assembly line and/or conveyor belt (1), and in each case the said intermediate carrying elements (2) with end faces (9) concave on both sides are designed as short intermediate elements (8) between the said load-receiving carrying elements (2) with end faces (6, 7) convex on both sides.

2. (Currently Amended) The curved assembly line and/or conveyor belt as claimed in claim 1, ~~characterized in that~~ wherein a multiplicity of said carrying elements (2) are joined together via connecting members into a closed or open composite platform structure.

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3. (Currently Amended) The curved assembly line and/or conveyor belt as claimed in ~~claims 1 and~~ claim 2, characterized in that ~~the~~ wherein said connecting members of ~~the~~ said carrying elements are coupling rods (10), and ~~in each case~~ wherein two adjacent ones of said load-receiving carrying elements (2) separated by a common ~~intermediate piece (8) and~~ having convex end faces (6, 7) one of said intermediate carrying elements are connected to one another in an articulated manner by ~~means of a common one of said coupling rod (10);~~ the rods, wherein two articulation points (11) of each of said coupling rod (10) rods lying in ~~each case on the radius center points of the~~ said concave and convex end faces (6, 7, 9) of the carrying elements (2, 8) which are curved ~~concavely in the form of an arc of a circle.~~

4. (Currently Amended) The curved assembly line and/or conveyor belt as claimed in ~~claims 1 to~~ claim 3, characterized in that including roller guides or sliding guides are ~~provided~~ on the end face in those regions of the load-receiving and intermediate carrying elements (2, 8) which face one another.

5. (Currently Amended) The curved assembly line and/or conveyor belt as claimed in ~~one of~~ claims 1 to claim 4, characterized in that ~~the drive takes place by means of~~ including a drive for said assembly line and/or conveyor belt, said drive comprising a plurality of friction-wheel stations distributed along the travel of ~~the~~ said load-receiving and intermediate carrying elements (2, 8).

6. (Currently Amended) The curved assembly line and/or conveyor belt as claimed in ~~one of~~ claims 1 to claim 4, characterized in that ~~the~~ including a drive for the assembly line and/or conveyor belt (1) takes place via, said drive comprising individual drives which are assigned to at least every nth one of said load-receiving carrying element ~~(2) elements~~ and which are arranged, co-moving, on the corresponding one of said load-receiving carrying element ~~(2) elements~~.

7. (Currently Amended) The curved assembly line and/or conveyor belt as claimed in ~~one of~~ claims 1 to 6, characterized in that ~~the~~ claim 1 including contact lines to supply energy and/or data supply to the carrying elements (2) takes place permanently via contact lines.

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8. (Currently Amended) The curved assembly line and/or conveyor belt as claimed in ~~one of~~ claims 1 to 6, characterized in that the claim 1 including a supply of energy and/or data supply takes place, said supply being permanently or inductively in sections.

9. (Currently Amended) The curved assembly line and/or conveyor belt as claimed in ~~one of~~ claims 1 to 8, characterized in that the claim 1, including guidance of at least every second load-receiving carrying element (2) takes place via at least one guide rails (17) rail laid on the ground.

10. (Currently Amended) The curved assembly line and/or conveyor belt as claimed in ~~one of~~ claims 1 to 9, characterized in that claim 9, wherein said at least one guide rail comprises one chosen from a single guide rail and a pair of guide rails and wherein the distance between twosaid pair of guide rails (17) laid with a spacing between them is reduced in the curved region, or in that, in the case of one guide rail, the and wherein said single guide rail is designed with a small width in the curve.

11. (Currently Amended) The curved assembly line and/or conveyor belt as claimed in ~~one of~~ claims 1 to 10, characterized in that the claim 9 wherein said load-receiving intermediate carrying elements (2, 8) rotating in a closed composite platform structure are preferably guided on an oval (stadium-shaped) path of rotation with two straight conveying sections and with semicircular curves connecting thesesaid straight conveying sections on both sides.

12. (Currently Amended) The curved assembly line and/or conveyor belt as claimed in ~~one of~~ claims 1 to 11, characterized in that the claim 9, wherein lateral guidance of thesaid load-receiving carrying elements (2) takes place at outer and/or inner carrying rails.

13. (Currently Amended) The curved assembly line and/or conveyor belt as claimed in ~~one of~~ claims 1 to 12, characterized in that the claim 12, wherein said intermediate elements (8) rotate, unguided.

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14. (Currently Amended) The curved assembly line and/or conveyor belt as claimed in ~~one of~~ ~~claims 1 to 13~~, characterized in that claim 1 including active or passive lifting devices that are installed in at least individual ones of said load-receiving carrying elements ~~(2)~~.

15. (Currently Amended) The curved assembly line and/or conveyor belt as claimed in ~~one of~~ ~~claims 1 to 14~~, characterized in that claim 19 including vertical arcs that are provided in the ~~carrying and/or~~ at least one guide rails ~~(17)~~ rail for changing the level of the plane of rotation, and ~~the~~ wherein said load-receiving and intermediate carrying elements ~~(2, 8)~~ are additionally connected to one another via horizontal joints.

16. (Currently Amended) The curved assembly line and/or conveyor belt as claimed in ~~one of~~ ~~claims 1 to 15~~, characterized in that the claim 1, wherein said intermediate carrying elements ~~(8) designed as an intermediate element~~ are configured to be easily removable for inspection and/or maintenance purposes.

17. (Currently Amended) The curved assembly line and/or conveyor belt as claimed in ~~one of~~ ~~claims 1 to 15~~, characterized in that claim 1, wherein vertical load transmission takes place via co-moving steel rollers ~~(13)~~, ~~all the~~ said steel rollers ~~(13)~~ being mounted rotatably about ~~the~~ a vertical axis.

18. (New) The curved assembly line and/or conveyor belt as claimed in claim 1, wherein two adjacent ones of said load-receiving carrying elements separated by a common one of said intermediate carrying elements are connected to one another in an articulated manner by a common coupling rod, wherein two articulation points of said coupling rod lying on radius center points of said concave and convex end faces.

19. (New) The curved assembly line and/or conveyor belt as claimed in claim 1, including roller guides or sliding guides on the end face in those regions of the load-receiving and intermediate carrying elements which face one another.

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20. (New) The curved assembly line and/or conveyor belt as claimed in claim 1, including a drive for said assembly line and/or conveyor belt, said drive comprising a plurality of friction-wheel stations distributed along the travel of said load-receiving and intermediate carrying elements.

21. (New) The curved assembly line and/or conveyor belt as claimed in claim 1, including a drive for the assembly line and/or conveyor belt, said drive comprising individual drives which are assigned to at least every nth one of said load-receiving carrying elements and which are arranged, co-moving, on the corresponding one of said load-receiving carrying elements.